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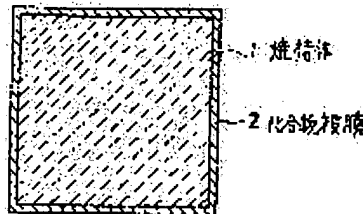
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(54) PERMANENT MAGNET AND MANUFACTURE THEREOF

(57)Abstract:

PURPOSE: To prevent rust by adhering the compound film, containing Ti and at least a kind of Nd, Fe, B and O, is adhered to the surface of an Nd-Fe-B magnet.

CONSTITUTION: Raw materials Nd, Fe and B are prepared so that the alloy powder of Nd₁₅Fe₇₇B₆ indicated by mol.%, and an ingot is formed. The ingot is formed into fine powder by crushing and it is molded in a magnetic field, and a prescribed heat treatment is performed. The obtained sintered body is polished into the prescribed shape, the fats and oils on the surface are removed by washing with acetone, and the sintered body is dipped into the ethanol solution containing organic titanium Ti[OCH(CH₃)₂]₄ of 3wt.%. Then, said sintered body is dried up in an N₂ air stream of 120°C. Subsequently, the sintered body with a sheath is heated up to 900°C at 10°C/min in an Ar-ventilated furnace, and after the sintered body is held in that state for one hour, it is cooled quickly together with the sheath. As a result, the film 2 of the compound containing Ti is formed on the whole surface of a magnetic sintered body 1, and the permanent magnet on which rust is hardly generated can be obtained.



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